

## ABSTRACT

### APPARATUS AND METHODS RELATING TO HUMIDIFIED AIR AND TO SENSING COMPONENTS OF GAS OR VAPOUR

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Apparatus (10) is shown for providing a flow of humidified air at a selected humidity level, and a method is disclosed of monitoring olfactory parameters of a sample gas or vapour to provide a "finger print" or profile of an odour. The flow of humidified air is used to set a level of humidity in a sensor chamber (36) which is the same as the level of humidity in a sample chamber (44) containing the sample of gas or vapour. The sample gas or vapour is then introduced into the sensor chamber (36), where an array of olfactory sensors record the odour profile, without a sudden change of humidity level when the sample gas or vapour is admitted. The flow of humidified air at a selected humidity level is obtained from a generator (10) having a controllable valve 14 for directing a clean dry air stream along either of two paths (17,18), one of which includes a humidifier 22. Air from the two paths is combined in a mixing chamber 21 and the humidity level is monitored by a sensor 23 with a feedback loop to control the valve 14. Sensors other than olfactory sensors, e.g. infrared sensors, may be used.

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(Figures 1 and 2).